5. A core layer comprising an ethylene vinyl alcohol copolymer.

The 5,055,355 patent recites in col. 2, lines 21-23, "Such structures include at least one core layer of ethylene vinyl alcohol copolymer sandwiched between outer layers of polyamide." Therefore, the '355 patent specifically discloses an EVOH core.

6. Two intermediate layers each comprising a polyamide

The 5,055,355 patent recites in col. 2, lines 21-23, "Such structures include at least one core layer of ethylene vinyl alcohol copolymer sandwiched between outer layers of polyamide." Therefore, the '355 patent specifically discloses a two intermediate layers of nylon adhered directly to the EVOH core.

7. Two outer layers each comprising a polymeric material or blend of polymeric materials

The 5,055,355 patent recites in col. 3, lines 46-52, "In addition to having at least one layer of polyamide adjacent to at least one layer of ethylene vinyl alcohol copolymer the film laminate of the present invention can include laminates and other polymeric film layers. Included in the other polymer film layers are polyolefins and polyolefin copolymers including ionic copolymers." Therefore by combining this disclosure with element 4 above, the '355 patent specifically discloses the presence of two additional outer layers comprising a polymeric material which are adhered to the nylon layers.

8. Two layers, each comprising an adhesive material, which adhere each of said intermediate layers to a respective outer layer

The 5,055,355 patent recites in col. 3, lines 46-57, "In addition to having at least one layer of polyamide adjacent to at least one layer of ethylene vinyl alcohol copolymer the film laminate of the present invention can include laminates and other polymeric film layers. Included in the other polymer film layers are polyolefins and polyolefin copolymers including ionic copolymers. Adhesive layers include modified polyolefins. Non-limiting examples of other polymeric layers and adhesives which can be used in the film laminate of the present invention are disclosed in U.S. Pat. Nos. 4,058,647 and 4,254,169 both hereby incorporated by reference."

And US Patent 4,058,647 recites in col. 1, lines 33-45:

> "it has been proposed to form a laminated sheet with a polyester, a polyamide, a hydrolyzed EVA, etc. which has characteristics to overcome said disadvantages.
>
> However, polyolefins are nonpolar materials as is evident from their chemical structure, and they have low affinity for said resins. Accordingly, even though a polyolefin is melt pressed with one of said resins, the layers of the laminated product can be easily removed by peeling.

> It has been proposed to provide an adhesive composition layer between the layers of said resins."

Therefore the '355 patent by incorporating the '647 patent discloses an adhesive resin located between the polar polyamide (nylon) layers and the nonpolar polyolefin layers to adhere the layers together such they can not be peeled apart.

Consequently, the '355 patent discloses all of the elements of claim 11 of the '419 patent to one of ordinary skill in the art.

US Patent 4,511,610, "Multi-Layer Drawn plastic Vessel", Jinichi yazaki, Kozaburo Sakano, assignee Toyo Seikan Kaisha Ltd., Apr 16, 1985.

1. An oriented

The 4,511,610 patent recites in col. 1. lines 24-29, "In order to reduce the thickness of the vessel wall as much as possible, improve the rigidity, impact resistance and other mechanical properties of the vessel wall and also improve the transparency and gas barrier property, it is preferred that this multi-layer plastic material be molecularly oriented in at least one direction." Therefore the '610 patent specifically discloses orientation for the purpose of reducing the thickness, improving rigidity (stiffness), impact resistance (durability), mechanical properties, transparency (optics) and enhancing barrier properties.

The 4,511,610 patent also recites in col. 1, lines 30-31,"..., plastic processing such as draw forming or biaxial draw-blow forming is advantageous..." This use of biaxial draw-blow forming would have been understood to one of ordinary skill in the art to be comparable in effect to the orientation produced by the double bubble process.

2. Coextruded film

The 4,511,610 patent recites in col. 7, lines 31-33, "According to the present invention, a parison or sheet having the above-mentioned multi-layer structure is formed by co-melt extrusion ..." Therefore, the '610 patent specifically discloses a coextruded film.

3. Having at least 7 layers

The 4,511,610 patent recites in col. 7, lines 23-25, "Seven-layer structures of (B)/(B+A+C)/(C)/(A)/(C)/(B+A+C)/(B) and (B)/(B')/(C)/(A)/(C)/(B')/(B)." Therefore the '610 patent specifically discloses two, 7 layer film structures.

4. Arranged symmetrically

The 4,511,610 patent recites in col. 7, lines 23-25, "Seven-layer structures of (B)/(B+A+C)/(C)/(A)/(C)/(B+A+C)/(B) and (B)/(B')/(C)/(A)/(C)/(B')/(B)." Therefore the '610 patent specifically discloses two structures which would have been understood by one of ordinary skill in the art to be symmetrical in the layer arrangement.

5. A core layer comprising an ethylene vinyl alcohol copolymer

The 4,511,610 patent recites in col. 7, l. 13, "...oxygen-barrier layer (A)...", which in combination with the '610 patent, col. 7, lines 1-7, "In view of the oxygen-barrier property, a copolymer obtained by saponifying an ethylene/vinyl acetate copolymer... is preferably used as the ethylene/vinyl alcohol copolymer in the multi-layer vessel of the present invention."

One of ordinary skill in the art would have known that a saponified ethylene/vinyl acetate copolymer was an ethylene vinyl alcohol copolymer. Therefore the '610 patent specifically discloses the use of an ethylene vinyl alcohol copolymer as the oxygen barrier core.

6. Two intermediate layers each comprising a polyamide

The '610 patent does not specifically disclose the presence of two intermediate nylon layers, however, one of ordinary skill in the art would have been motivated to replace the adhesive layers adjacent to the EVOH core with nylon for the purpose of improving the oxygen barrier properties as I note below in the section on the obviousness of using nylon as intermediate layers.

7. Two outer layers each comprising a polymeric material or blend of polymeric materials

The '610 patent in describing the structures (B)/(B+A+C)/(C)/(A)/(C)/(B+A+C)/(B) and (B)/(B')/(C)/(A)/(C)/(B')/(B) recites in col. 7, lines 14, that "the olefin resin layer (B)" represents an outer layer.

Therefore the '610 patent specifically discloses the use of two outer layers of polymeric materials

8. Two layers, each comprising an adhesive material, which adhere each of said intermediate layers to a respective outer layer

The '610 patent in describing the structure (B)/(B+A+C)/(C)/(A)/(C)/(B+A+C)/(B) recites in col. 7, lines 12, "the adhesive layer (C)."

Therefore the '610 patent specifically discloses the use of two adhesive layers located between the polymeric outer layers and the intermediate layers adhered to the EVOH core.

Consequently, all of the elements of claim 11 of the '419 patent except for element 6 the polyamide intermediate layers are disclosed and because there was motivation to use nylon in the intermediate layers the subject matter of claim 11 of the '419 patent would have been obvious to one of ordinary skill in the art.

US Patent 4,572,854, "Mulitlayer Film With A Gas and Aroma Barrier Layer and A Process For The Preparation and Application Thereof", H. Dallmann, H. J. Palmer, assignee Hoechst Aktiengesellschaft, Feb 25, 1986.

1. An oriented

The 4,572,854 patent recites in col. 6, lines 48-51, "The film according to the present invention produced by coextruding layers...and then stretching, at least biaxially". Therefore the 4,572,854 patent specifically disclose an oriented film.

2. Coextruded film

The 4,572,854 patent recites in col. 6, lines 48-50, "The film according to the present invention produced by coextruding layers B, C, D, C (B optional), or A, B, C, D, C, (B and A optional)..."

Therefore the 4,572,854 patent specifically disclose the a coextruded film.

3. Having at least 7 layers

The 4,572,854 patent recites in col. 7, l. 10, "The production of a seven-layer film..." Therefore the 4,572,854 patent specifically disclose a 7 layer film.

4. Arranged symmetrically

The 4,572,854 patent recites in col. 7, lines 10-16, "The production of a seven-layer film is appropriately carried out with the use of a three-layer die. In the case of a symmetric film structure, the melts of the polymers for layers B, C, and D may be extruded through the center channel and the melts for the outer sealing layers A simultaneously through the outer channels onto a chill rolines" Also figure 6 of the '854 illustrates a seven layer film with the layers arranged symmetrically.

Therefore the 4,572,854 patent specifically disclose a symmetric layer placement for a 7 layer film.

5. A core layer comprising an ethylene vinyl alcohol copolymer

The 4,572,854 patent recites in col. 3, lines 65-67, "The barrier layer D serves as a gas barrier, in particular an oxygen or aroma barrier, and is comprised of an ethylene-vinyl alcohol copolymer..." Therefore the 4,572,854 patent specifically disclose the use of an EVOH copolymer as a barrier core layer.

6. Two intermediate layers each comprising a polyamide

The '854 patent does not specifically disclose the presence of two intermediate nylon layers, however, there would have been motivation for one of ordinary skill in the art to replace the adhesive layers adjacent to the EVOH core with nylon containing layers for the purpose of improving the oxygen barrier properties as I note below in the section on the obviousness of using nylon as intermediate layers.

Furthermore, the '854 patent specifically discussed EP 0063006A1. This provides additional motivation to use the teachings of the '006 application which includes using nylon as the intermediate layers.

7. Two outer layers each comprising a polymeric material or blend of polymeric materials

The 4,572,854 patent recites in col. 7, lines 14-15, "...outer sealing layers A..." and col. 7, lines 60-61, "A film sealable on both sides, comprising (1) an ethylene-propylene copolymer for layer A". Therefore the 4,572,854 patent specifically disclose the use of polymeric materials for outer sealing layers.

8. Two layers, each comprising an adhesive material, which adhere each of said intermediate layers to a respective outer layer

The 4,572,854 patent recites in col. 3, lines 34-35, "B contains adhesion-promoting material..." Figure 6 of the '854 patent illustrates layer B as located between the outer layer A and the intermediate layer C. Therefore the 4,572,854 patent specifically disclose the use of an adhesion layer located between layers A and C.

Consequently, all of the elements of claim 11 of the '419 patent except for element 6 the polyamide intermediate layers are disclosed and use of nylon in the intermediate layers would have been motivated so that the subject matter of claim 11 as a whole would have been obvious to one of ordinary skill in the art.

A. L. Blackwell, "Ethylene Vinyl Alcohol Resins As A Barrier Material In Multi-Layer Packages", J. Plastic Film & Sheeting, Vol. 1, (1985), pp 205-214.

The article of Blackwell specifically discloses all of the elements used in the claim 11 of the '419 patent to one of ordinary skill in the art. The Blackwell article describes the various technologies which were known to one of ordinary skill in the art for the use of EVOH for the design and manufacture of multilayer oxygen barrier packaging materials for perishable food products.

It specifically teaches the use of EVOH barrier layers to improve both the oxygen and aroma barrier of cast and blown (oriented) multilayer coextruded films (bottles and sheets) and that the barrier properties of the EVOH can be enhanced by orientation of the EVOH layers as is typical of most oriented films. However, it disclosed that EVOH barrier properties are compromised by water absorbed into the EVOH and that EVOH should be used in the interior of films and should be covered by appropriate moisture barrier materials such as the polyolefins. It would have been known or understood by one of ordinary skill in the art that the moisture protection would have been optimized by placing the EVOH in the center of a film and covering both surfaces with a moisture barrier layer.

The Blackwell article also disclosed that while 5 layer films were popular that 6 and 7 layer films were also being used.

The Blackwell article at p. 211 also disclosed "In balance structures, there are two equal thicknesses of adhesive layers and two equal thicknesses of the primary resin layers." In my opinion one of ordinary skilled in the art would have understood this to mean "arranged symmetrically".

Films containing intermediate layers of nylon adhered directly to the EVOH core were well known to one of ordinary skill in the art and as disclosed by Blackwell and the Journal of Commerce, would not have required an adhesive layer between the EVOH and Nylon (similar polarity and chemical compatibility). But one of ordinary skill in the art would have known that an adhesive would still be required between the Nylon and the outer polyolefin moisture barrier layer due to the difference in polarity and chemical compatibility between the polymers (as was the case with the EVOH) therefore resulting in a 7 layer coextruded film with the layers arranged symmetrically.

Consequently, the Blackwell article discloses all of the elements of claim 11 of the '419 patent. If the Court or the jury determines any of the elements are not disclosed in the Blackwell article it is also my opinion that the subject matter of claim 11 of the '419 patent would have been obvious to one of ordinary skill in the art based upon the Blackwell article alone or combined with other prior art references for the reasons presented in the motivations section below.

Rolf Hessenbruch, "Recent Development In Blown Film Coextrusion", Tappi Proceedings, Book 1, 1984 Polymers, Laminations and Coatings Conference, Sept 24-26 (1984), pp 85-94.

The Hessenbruch article discloses blown film (oriented) (p. 92, table 4) heat sealable, multilayer, barrier coextrusions which are of both symmetrical (p. 86) and asymmetrical configurations. The barrier films are for packaging applications and thermoforming (solid state orientation) with both nylon (p. 89) and EVOH (p. 88) barrier layers which are attached to outer polyolefin layers (p. 87) by the use of adhesive resins (p. 87). The article also disclosed the poor mechanical properties of the EVOH and the need to combine it with materials of higher mechanical strength and that nylon films are stronger than comparable EVOH films (p. 88). The article also discloses use of a split barrier layers and 7 layer films with 5 polymer combinations to improve barrier and thermoforming (Draw or orienting) properties.

Consequently, the Hessenbruch article discloses all of the elements of claim 11 of the '419 patent. If the Court or the jury determines any of the elements are not disclosed in the Hessenbruch article it is also my opinion that the subject matter of claim 11 of the '419 patent would have been obvious to one of ordinary skill in the art based upon the Hessenbruch article alone or combined with other prior art references for the reasons presented in the motivations section below.

Journal of Commerce Article, Hatley Article and Hatley Film

The Journal of Commerce article and the Hatley article disclose a film provided to Rutgers University. I will refer to that film as the Hatley film. The Hatley article discloses that the Hatley film is a 9 layer film with a structure (pp. 1, 4, 5 and 7):

HDPE/tie/nylon/tie/EVOH/tie/nylon/tie/HDPE

The Hatley article also discloses that the Hatley film was 1.40 mils thick (p. 7).

I am informed that more information about the Hatley film is being sought and may be obtained during discovery. I reserve the right to supplement my description of the Hatley film as additional information becomes available.

The Hatley article discloses coextruded films, it recites "nylon film coextrusions offer the most cost-effective barrier..." (p. 1).

The thickness of the Hatley film and the relative ratings of barrier protection would have indicated to one of ordinary skill in the art that the film was oriented. There is nothing disclosed that would indicate that it was unoriented.

No mention is made as to the thickness of the individual layers and the article does not use the term "arranged symmetrically" to define the layer arrangement. As no mention is made of the film having a preferred orientation in the tests it is my opinion that one of ordinary skill in the art would have understood that the layer pairs were identical in composition and would have had equal thickness, i.e. would have been arranged symmetrically. While it is not yet settled what the term "arranged symmetrically" will ultimately mean as claim construction has not yet been completed, I understand that to Cryovac it means only that the layer pairs are similar without regard to thickness of the individual layers. Therefore, this structure would apparently fall under Cryovac's definition (if it is not indefinite) because there is no indication of any difference in composition in the layer pairs.

However, even if the layers in the Hatley film were not arranged symmetrically, there would have been ample motivation to one of ordinary skill in the art to arrange the layers symmetrically to provide a film which would be curl resistant and which would give consistent product protection if turned over so that the subject matter of claim 11 of the '419 patent would have been obvious to one of ordinary skill in the art.

US Patent 4,640,852, "Multiple Layer Films Containing Oriented layers Of Nylon And Ethylene Vinyl Alcohol Copolymer", W. F. Ossian, assignee American Can Company, Feb 3, 1987.

1. An oriented

The '852 patent recites in col. 4, lines 10-11, "At least the recited first through third layers are molecularly oriented." Therefore, the '852 patent specifically discloses an oriented film.

2. Coextruded film

The '852 patent recites in col. 5, lines 2-4, "Layer 320 is the sealing layer, which is preferrably susceptible of coextrusion with the rest of the structure." Therefore, the '852 patent specifically discloses the coextrusion of a multilayer film.

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3. Having at least 7 layers

The '852 patent does not explicitly describe the use of 7 layers. However, it does disclose the use of 5 layers. The obviousness of adding two additional layers is described below in the section entitled the obviousness of adding outer polymer layers.

4. Arranged symmetrically

The '852 patent does not explicitly describe a film with the layers "arranged symmetrically". The obviousness of having the layers be "arranged symmetrically" is described below in the section entitled the obviousness of adding outer polymer layers.

5. A core layer comprising an ethylene vinyl alcohol copolymer

The '852 patent recites in col. 5, l. 2, "Layer 314 is EVOH." Therefore, the '852 patent specifically discloses an EVOH core layer.

6. Two intermediate layers each comprising a polyamide

The '852 patent recites in col. 5, lines 1-2, "Layers 312 and 316 are nylon."

Therefore, the '852 patent specifically discloses two layers of nylon adhered directly to the EVOH core.

7. Two outer layers each comprising a polymeric material or blend of polymeric materials

The '852 patent recites in col. 5, lines 2-3, "Layer 320 is the sealing layer..." recites in col. 6, lines 31-37, "Layer 20, as at 320 in FIG. 3, is preferrably a heat sealable polymer. It is also preferrably susceptible of coextrusion with the rest of the structure as at 310. A highly satisfactory, and preferred composition for layer 20 is polypropylene copolymer, preferrably containing 2-8% ethylene. Another preferred composition for layer 20 includes linear low density polyethylene. Blends of PPE and LLDPE are also acceptable." Therefore, the '852 patent specifically discloses an outer layer of polymeric material and the obviousness of a second outer layer is discussed below in the section entitled the obviousness of adding outer polymeric layers.

8. Two layers, each comprising an adhesive material, which adhere each of said intermediate layers to a respective outer layer

The '852 patent recites in col. 5, lines 4-6, "Layer 318 is an adhesive which is effective to join layers 316 and 320 with good interfacial adhesion." Therefore, the '852 patent specifically discloses the use of adhesive layers for the adhesion of the nylon to the outer polymeric layers and the obviousness of a second adhesive layer is discussed below in the section entitled the obviousness of adding outer polymeric layers.

Consequently, it is my opinion that the '852 patent when combined with an additional pair of adhesive and outer polymeric layers adhered to the exposed nylon layer would have made the subject matter of claim 11 of the '419 patent obvious to one of ordinary skill in the art.

Translation of: Utility Model Application Publication Number: 60-27000, application number 54-84842, Mamoru Yoshimoto, Kyutaro Taleuchi, applicant Sumitomo Bakelite Co., Ltd., publication date August 14, 1985.

The English translation of Japan Utility Patent 60-27000 discloses the deep draw orientation of a coextruded 7 layer structure PP/tie/polyamide/EVOH/polyamide/tie/(PE EVA or ionomer) to improve its barrier property English Translation, Detailed Description, ¶3. It would have been understood by one of ordinary skill in the art that deep draw molding is a solid state orientation method and would have been capable of imparting both uniaxial and/or biaxial orientation to the drawn multilayer film or sheet.

Therefore, it is my opinion that the Japan Utility Patent 60-27000 discloses all of the elements claimed in claim 11 of the '419 patent except that the outer layers are not arranged symmetrically because they are made of different materials.

European Patent Application 0 063 006 A1, "EVOH copolymer blend, a process for producing a composite film therefrom and the composite film per se.", Oderzynski, T. W., Knott, J. E., Applicant American Can Company, 20/10/1982.

The 006 application is directed to multilayer, coextruded films for packaging which incorporate EVOH barrier layers and discloses the use of "structural layers, such as may provided by nylon, polyethylene, polypropylene and the like, and to various heat sealing layers, ..." to improve the toughness and brittleness of the EVOH containing films as well as the need for additional moisture barrier protection to maintain the EVOH is a dry state. It is my opinion that the '006 application supplies sufficient motivation for the incorporation of nylon intermediate layers into oriented multilayer EVOH containing structures in order to obtain the improvements and benefits set forth in the '006 application.

US Patent 4,608,286, "Gas Barrier Multilayer packaging Material Having Excellent Flexing Endurance", Yasuo Motoishi, Kenji Satoh, Kyoichiro Ikari, Assignee Kuraray Co. Ltd., Aug 26, 1986.

This reference is directed to the art of "...a flexible multilayer packaging material showing no reduction in gas barrier properties even under extremely severe flexing fatigue conditions. More specifically, it provides a flexible multilayer packaging material comprising a thin layer composed of a saponified product of an ethylene-vinyl acetate copolymer (hereinafter referred to as the EVOH) having gas barrier properties against oxygen, carbon dioxide etc. as an intermediate layer, said flexible multilayer packaging material being further provided with linear low-density polyethylene layers as surface layers on both sides of said multilayer packaging material." (Col. 1, lines 11-19.)

It is my opinion that the '286 patent in its discussion of split EVOH layers (col. 7, line s48-64) supplies additional motivation for the incorporation of intermediate nylon layers.

US Patent 4,361,628, "Coextruded Film of Polypropylene Blend and Nylon", Duane A. Krueger, Thomas W. Odorzynski, Assignee American Can Company, Nov 30, 1982.

The '628 patent discloses a nylon/EVOH/nylon/tie layer/polypropylene based layer (col. 3, lines 13-18) and would supply motivation for the use of nylon as intermediate layers surrounding an EVOH core layer as discussed below in the section on the obviousness of using nylon as intermediate layers.

Motivations for Obviousness

1. The Motivation For Adding Outer Polymeric Layers

The '852 patent discloses a molecularly oriented, 5 layer coextruded multilayer oxygen barrier film for the purpose of retort packaging. The '852 film structure has an exposed nylon layer attached to a core of EVOH which is attached to an additional nylon layer which is bonded to an outer polyolefin layer by a suitable adhesive polymer. Therefore, the '852 structure can be depicted as:

Nylon/EVOH/nylon/tie/polyolefin moisture barrier sealant

While this film is a good solution for the production of retort pouches as it allows for the recovery of the EVOH layers oxygen barrier after retort processing, the exposed nylon surface does not supply an adequate level of moisture protection for the EVOH to maintain the best potential oxygen barrier possible for the EVOH layer in non-retort applications.

In the area of oxygen sensitive foods, it was generally known to one of ordinary skill in the art that shelf life could be extended by improving the oxygen barrier of the film. As barrier layers of nylon/EVOH/nylon as shown in the '852 patent were well known to be more durable than single layers of EVOH, they were desirable barrier layers for oxygen sensitive products. However, nylon and EVOH will absorb moisture and nylon has relatively high moisture permeability and could not supply an acceptable level of moisture protection to the EVOH to optimize the potential oxygen barrier (figure 3 of Blackwell) and it was well known to one of ordinary skill in the art that EVOH and nylon/EVOH/nylon layers should be covered with moisture resistant layers such as polypropylene or polyethylene to optimize barrier properties (Blackwell, Journal of Commerce).

Indeed the person of ordinary skill in the art would have been motivated to cover the exposed nylon layer by adding the additional moisture barrier to the exposed nylon layer to further protect the EVOH from environmental moisture much as is described in the Blackwell reference p 210. However, it would have been obvious to one of ordinary skill in the art packaging that the addition of the extra polymeric moisture barrier layer will require the incorporation of an adhesive layer between the nylon and the outer barrier layer thereby producing a 7 layer structure. If the additional moisture barrier and adhesive layers were chosen to match the adhesive and moisture barrier polymer of the '852 patent then the 7 layer structure, sealant/adhesive/nylon/EVOH/nylon/adhesive/sealant, would be arranged symmetrically and all of the claim elements of claim 11 of the '419 patent would be met.

It would have been obvious to one of ordinary skill in the art to add the same adhesive layer and sealant layer compositions and thicknesses to the exposed nylon surface of the '852 patent as was already present on the other nylon resin and create a 7 layer structure with the layers arranged symmetrically. Arranging the layers symmetrically would have been known to prevent curling of the 7 layer film and could also have simplified the manufacturing of the film as no additional extrusion equipment (extruders, melt filters, resin storage, resin conveying equipment, etc) would be necessary and only a new 7 layer die and adapter would be required.

Therefore it is my opinion that one of ordinary skill in the art would have been motivated to add two additional layers to a 5 layer structure such as is in the '852 patent to form a film that meets all of the elements of claim 11 of the '419 patent, would have been obvious to one of ordinary skill in the art.

2. The Motivation For of Using Nylon In Intermediate Layers

At least US Patents 4,572,854 and 4,511,610 contain all of the claim elements of claim 11 of the '419 patent except that the intermediate layers are not comprised of nylon or polyamides. However, it is my opinion that the use of intermediate nylon layers adhered directly to (or by use of a tie layer) the EVOH core was well established and was well known to one of ordinary skill in the art. There was sufficient motivation to combine nylon with EVOH layers for the purpose of improving the durability and stretching (deep draw, thermoforming, vacuum thermoforming, draw blow molding) and performance of the films so that one of ordinary skill in the art would have found it obvious to substitute the nylon intermediate layers to the EVOH core.

When developing oriented multilayer films which are produced by blown or solid state orientation methods it is common to examine the literature for blow molding (melt orientation) and stretch blow molding or thermoforming disclosures (for double bubble or tenter frame orientation) to gain insights as to what material combinations and process parameters might be used to obtain oriented films of the disclosed resin combinations. This is because stretch blow molding is a biaxial, solid state orientation which can be performed simultaneously (as in the double bubble process) or sequentially (as in the tenter process). Thermoforming is also a solid state orientation process as it is performed above the glass transition or softening temperature of the polymers but below their melting point which is the same temperature range as used in sequential and simultaneous tenter and double bubble orientation processes.

There were several excellent reasons that one of ordinary skill in the art would have been motivated to include the nylon into the coextruded film. First the durability in flexing (and orientation) of the EVOH layer would have been significantly improved by the use of the nylon layers adhered to the EVOH layer surfaces, thereby improving the oxygen barrier and barrier durability of the composite film, and as the nylon is an oxygen barrier itself the composite film would have an additional oxygen barrier enhancement. As nylon is tough and puncture resistant, the overall toughness and puncture resistance of the film would have been improved by the nylon layer inclusion. Also, as disclosed in the Journal of Commerce, the Nylon layers in combination with the EVOH give a broader flavor and aroma barrier profile to the film than either the Nylon or EVOH would supply alone as each material has its unique chemical resistance profile which is the basis of the flavor and aroma barrier properties. The nylon was less expensive than the EVOH and the use of Nylon in conjunction with the EVOH permits the substitution of a portion of the EVOH by the Nylon, therefore using at least amount of the EVOH necessary to supply the appropriate oxygen barrier (augmented by the Nylon) and giving the broadest composite barrier (oxygen and flavor) to the combination for the lowest cost.

The '006 application discloses the use of nylon layers adhered directly to both plain and modified EVOH core layers (p. 7, lines 14-17). The use of nylon as a compatilizer and orientation and ductility improver for EVOH as well as a companion structural [barrier] layer adhered directly to the EVOH core layer was disclosed in EP 0063006 A1 which states on page

13, "As indicated previously, the EVOH copolymers are normally utilized in multilayer films including other components intended to impart toughness, structural integrity, water vapor barrier properties, tensile strength, and other characteristics. Typical of such companion layers are the film-forming polyamides,..., Because of the poor adhesion of EVOH compositions to most resins other than polyamides,..." and on page 15, "layers of nylon 6 on the opposite sides of a core of unmodified EVOH copolymer" and in example 4, p18 "the composite film product contains successive layers of nylon, modified EVOH copolymer, nylon, adhesive, SURLYN..."

The structure of the Japan application 60-27000 which exhibits improved flexibility due to the polypropylene [polyolefin] layers and pinhole resistance during deep drawing [orientation] when in combination with the nylon layers, Japan 60-27000, "... the polyamide resin layer – an intermediate layer used for improving the resistance to developing pinholes-..."

The English translation of Japan Utility Patent 60-27000 discloses the deep draw orientation of a 7 layer structure PP/tie/polyamide/EVOH/polyamide/tie/(PE, EVA, or ionomer) to improve its barrier property. It is understood by one of ordinary skill in the art that deep draw molding is a solid state orientation method and would have been capable of imparting both uniaxial and/or biaxial orientation to the drawn multilayer film or sheet.

The 4,361,628 patent discloses a 5 layer structure of:

a polymeric material/adhesive polymer/nylon/EVOH/nylon

and recites in:

> col. 1, lines 67-68, "Layer 16 is a polymer, copolymer, or blend thereof selected from the nylon family of polyamides" and in
>
> col. 3 lines 13-15, "Layer[ ] ... 116 ha[s] the same composition [ ], and serve[s] the same function[ ] as layer[ ] ... 16" and
>
> col. 3, lines 16-18, "Layer 120 is a layer of nylon, and may be any nylon which may be coextruded with the gas barrier layer",

Therefore the '628 patent clearly discloses the use of nylon adhered directly to both surfaces of an EVOH gas barrier layer and as shown in Figure 2 as an intermediate layer between an outer polymeric layer and an adhesive layer and the inner EVOH barrier layer.

It would have been obvious to one of ordinary skill in the art to substitute intermediate nylon layers attached directly to the EVOH layer to improve the films durability and pin hole resistance. As disclosed in the translation of Japan application 60-27000, and in US Patent 4,608,286 col. 3, lines 38-40, "..The EVOH resin films are all extremely poor in flexing endurance...", and in EP 0 063 006 A1, "... films made of EVOH tend to lack toughness and to be brittle." It is clear that one of ordinary skill in the art would have understood that the EVOH layer was sensitive to damage on flexing. However each of these disclosures disclose the incorporation of additional layers adhered to both surfaces of the EVOH core to improve durability, US Patent 4,608,286, col. 3, lines 60-62, "...the improvement of the flexing endurance is noticeable only when the linear low density polyethylenes is used as both surface

layers." The translation of Japan application 60-27000 discloses, "...the polyamide resin layer – an intermediate layer used for improving the resistance to developing pinholes -..." and EP 0 063 006 A1 discloses, "To accommodate such deficiencies and still take advantage of their attributes, the EVOH resins are normally used in multilayer films, wherein the EVOH layer is laminated to one or more structural layers such as may be provided by nylon..."

The Journal of Commerce article also discloses the advantages of the Nylon/EVOH/Nylon combination as "Nylon and EVOH can be used together in film structures, sandwiched as a core between layers of High-density polyethylene or other polyolefins for moisture protection, to provide an extremely cost-effective barrier to aromas, flavors and odors. Nylon forms an inseparable bond with EVOH, protects the more sensitive EVOH from heat degradation and flex cracking and serves as a moisture absorber. Both nylon and EVOH are said to have excellent oxygen barrier properties." The Journal of Commerce article also disclosed the economic advantage of combining nylon with EVOH to improve the overall film performance at a reduced cost.

Chemical or flavor and aroma barrier is desirable for taste sensitive products and is supplied by the proper selection of the "barrier" polymer. It was well known to those of ordinary skill in the art that EVOH, nylon, polyacrylonitrile or PVDC (Saran®) all could have been used as flavor barrier resins. This barrier property is a little more complex than oxygen because the optimum flavor barrier material will be dependent on the chemical nature of the flavor and the chemical resistance of the barrier polymer to the chemical of the flavor. Thus optimum flavor and aroma protection will be different for various polymers and when used in combination two or more flavor barriers will be better than any individual polymer (Journal of Commerce, Hatley article). This property alone would be motivation to combine barrier layers together into a composite barrier layer.

There also was motivation for one of ordinary skill in the art to use intermediate nylon layers based upon the disclosure of the '562 patent, the 7 layer Fant film sample, the Hatley film sample the Blackwell disclosure and the Hessenbruch article to obviate the requirement of a tie layer between the EVOH and Nylon layers.

The '286 patent specifically disclosed the use of outer layers of durable polymers such as LLDPE adhered to EVOH layers using appropriate adhesive polymer layers such that the layers could not delaminate from the EVOH. When produced in this manner, the adhered LLDPE layers impart to the composite film a dramatic improvement in the flex crack resistance during film flexing (using a Gelbo flex apparatus) as measured by a retention of the gas barrier properties of the flexed films.

The EVOH layer was located between the two surface layers but may not be centered on the films center line as it was disclosed that at times it was advantageous to use multiple EVOH layers, EVOH layers of different ethylene content have been shown to have different oxygen and moisture barriers (Blackwell figure 1). This split EVOH layer was used to enhance the moisture barrier protection of the lower oxygen barrier EVOH layer to improve its moisture protection from differential environmental moisture levels, Col. 7, ll. 48-64, "... the intermediate EVOH layer may also be composed of multiple sub-layers of two or more sub-layers. On providing multiple EVOH sub-layers, an optimum constitution may be chosen according to the desired

purposes. For example, the EVOH having the same ethylene content may be used in all the sub-layers. Where the relative humidity of the inside of the container etc. is greater than the outside of said container, e.g., the product to be packaged is an aqueous mixture such as wine, it is preferred to arrange in EVOH sub-layers having a smaller ethylene content outside and an EVOH sub-layer having a larger ethylene content inside also considering the humidity dependency of the barrier properties of the EVOH. On the other hand, where the relationship of the relative humidity is opposite to the above, the positional relationship of said EVOH sub-layers is preferably in the opposite order."

Example 3 of the '286 recites a symmetric 7 layer film col. 9, l. 67 to col. 10, l. 16 with a composite three layer barrier adhered to two outer layers of LLDPE by two adhesive layers.

LLDPE/adhesive/EVOH/adhesive/EVOH/adhesive/LLDPE

The three layer barrier core was comprised of two identical EVOH layers adhered together by an adhesive resin. While example 4 recites, Col. 10 ll. 36-42, the 7 layer film was the same as in example 3 with the exception that the EVOH layers were comprised of 2 different EVOH polymers.

LLDPE/adhesive/EVOH(example 3)/adhesive/EVOH(example 2)/adhesive/LLDPE

From the teaching of the 286 patent that EVOH oxygen barrier could have been protected by improved moisture barrier components in the barrier layer, It would have been obvious to one of ordinary skill in the art to substitute the lower moisture barrier EVOH with a nylon layer and obtain an improved moisture protection of the EVOH barrier layer by using the nylon as a moisture absorbing layer (Journal of Commerce). To obtain a further improvement in the flex crack durability of the EVOH It would have been obvious to one of ordinary skill in the art to replace the symmetric 3 layer core of example 3 with a symmetric nylon/EVOH/nylon core, using the nylon as moisture absorbing layers and improving durability of the EVOH from the adjacent nylon layers while reducing the cost of the structure by replacing the more expensive EVOH with less expensive nylon (Hessenbruch, Journal of Commerce) and to maintain a symmetrical film structure to eliminate the potential for curling from the split EVOH core.

3. The Motivation For Orient Multilayer Coextruded Films

At least the '562 patent, Fant film sample, Hatley film sample, Journal of Commerce reference specifically disclose all of the claim elements of claim 11 of the '419 patent but arguably do not specifically use the term "oriented" or specifically disclose oriented films. As I stated earlier, it is my opinion that the '562 patent specifically discloses an oriented film of claim 11 of the '419 patent and that the Hatley film is consistent with an oriented film. However, it is my understanding that the Fant film has been described by Cryovac as unoriented, and to the extent that it or the '562 patent or the Hatley film are found by the Court or the jury not to be oriented it is my opinion that there are many compelling reasons why one of ordinary skill in the art would have been motivated to orient those films.

A person of ordinary skill in the art would have been motivated to orient coextruded multilayer barrier films to improve the barrier properties, to improve the mechanical, optical, shrink properties and to minimize the amount of materials consumed in the packaging of the product.

Therefore one of ordinary skill in the art would have been motivated to orient films based upon ordinary skill or to apply to films that were not oriented the teachings of oriented film and the advantages of orientation as disclosed in references such as US Patent 5,055,355 which disclosed the coextrusion and uniaxial and biaxial orientation of a three layer nylon/EVOH/nylon coextruded film for the purpose of improving oxygen barrier (col. 4 lines 57-64) over and above that which would have been expected from separate films of oriented nylon and EVOH thereby showing the superiority of orienting coextruded multilayer films with nylon/EVOH/nylon barrier layers.

In addition US Patent 4,511,610 disclosed in col. 1 lines 25-31 the advantage of orienting multilayer structures with EVOH cores to reduce the thickness of the structure while improving the rigidity, impact resistance and other mechanical properties as well as the transparency and gas barrier property. The '610 patent speaks to the advantage of using draw forming or biaxial draw-blow forming to create molecularly oriented materials which would have been understood by one of ordinary skill in the art to be equivalent to the second step of the double bubble process.

Also the Blackwell reference indicates on page 209, paragraph 1 "as is typical of other oriented films, the biaxially oriented EVOH film has much better barrier properties over the full range of humidities."

US Patent 4,572,854 discloses the use of biaxial orientation of multilayer coextruded films with an EVOH barrier core layer for the purpose of improving the film's physical properties and particularly the barrier properties of oxygen and aromas, odors and flavors, (chemical barrier) (col. 6, lines 48-53). This reference also discloses multiple oriented barrier layers (col. 4 lines 66 to 68) with tie layers. Combining this reference with Blackwell on page 210 where it is disclosed that nylon/EVOH/nylon coextrusions require no tie layers would motivate one to orient multiple barrier layers of EVOH and nylon.

The English translation of Japan Utility Patent 60-27000 discloses the deep draw orientation of a 7 layer structure PP/tie/polyamide/EVOH/polyamide/tie/(PE, EVA, or ionomer) to improve its barrier property. It would have been understood by one of ordinary skill in the art that deep draw molding is a solid state orientation method and will impart uniaxial and/or biaxial orientation to the drawn multilayer film or sheet.

US Patent 4,640,852 discloses in Example 1, a 5 layer coextruded, molecularly oriented, multilayer film containing the layer structure of: nylon/EVOH/nylon/tie/EP copolymer (PPE) sealant. The polymer layers are molecularly oriented in the solid state and used for retort packaging and show enhanced toughness and durability. Thus it would have been obvious to one of ordinary skill in the art to orient coextruded multilayer barrier films to improve film properties.

The EP0063006 reference also specifically discloses the potential improvement of the composite barrier layer Nylon/EVOH(plasticized/Nylon in orientation during thermoforming EP0063006 p 15, "yet another benefit attributable to ... concerns the results that are achievable in thermoforming films containing a layer of modified EVOH copolymer... the film is heated to a temperature below its melting point but above which it can be permanently deformed ... and is

subjected to either mechanical or fluid pressure, so as to modify its shape." This specifically disclosed the use of solid state orientation to the film of EP0063006. And in example 4 of EP0063006 which two multilayer coextruded films of the structure Nylon/EVOH(plasticized)/Nylon/adhesive/Surlyn (film 1) and a second film Nylon/EVOH/Nylon/adhesive/Surlyn (film 2) and the composite films are subjected to the thermoforming operation described above, EP0063006 p 19, "Finally ... the two films[of example 4] subjected to thermoforming operations..." with the stated conclusion of EP0063006 being; EP0063006 p 19, "Thus, it can be seen that that the present invention provides a novel EVOH blend which can be coextruded with other resins to produce composite films of uniform caliber, which films are relatively tough and exhibit reduced tendency to form pin-holes, splits and the like when subjected to thermoforming [stretch orientation] operations or abuse".

Vacuum thermoforming would have been understood by one of ordinary skill in the art to represent a solid state orientation where the film would have been heated above a softening temperature but below its melting point as in tenter stretching or double bubble processing, and then drawn into a cavity or mold by the application of a vacuum between the film and the mold surface, thereby making use of the fluid pressure of the surrounding atmosphere to force (blow) the film into the mold thereby orienting the film in a uniaxially and / or biaxially manner equivalent to a solid state stretching operation as described in the '419 patent.

Also, haze is impacted by film orientation due to the reduction in light scattering at the interface between polymer crystals and the unoriented polymer phase (in semicrystalline polymers such as polyethylene, polypropylene, nylon, EVOH, adhesive polymers). On orientation, the non crystalline polymer phase is aligned in the direction of applied stress and the chains are brought "closer" together, increasing the average phase density and lowering the density difference between the oriented phase and the crystals. This lower density difference results in less light scattering at the crystal/oriented phase boundary scattering less light and lowering the film haze and improving the film optical properties.

Secondary Considerations

I have been informed that part of the obviousness analysis includes a determination of whether the secondary considerations (which I am informed are also sometimes called objective evidence of nonobviousness) indicate that subject matter is nonobvious.

I understand that Cryovac has not yet provided any information about whether it believes that there is evidence of secondary considerations that would tend to shown that the subject matter of claim 11 is not obvious. I am not currently aware of any evidence of secondary considerations that I believe would indicate that the subject matter of claim 11 would not have been obvious to one of ordinary skill in the art.

May 19, 2005

Eldridge M Mount III

Eldridge M. Mount III, Ph.D

CERTIFICATE OF SERVICE

I hereby certify that I caused a true and correct copy of the **EXPERT REPORT OF ELDRIDGE M. MOUNT III,** to be served on the following counsel of record via Overnight Courier (Next Day Delivery Requested):

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This 19th day of May, 2005.

Attorney for Pechiney Plastic Packaging, Inc.

EXHIBIT 1

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Areas of Consulting:

Process audits and Optimization of extrusion and coextrusion processes
- Quality improvements
- Productivity improvement

Process design and equipment specification
Polymer film design and manufacturing
- Cast and oriented films
- Metallized films

In-house engineer and operator training
Expert Witness

Qualifications: Technical leader in the areas of Biaxial orientation, Extrusion and coextrusion melt processing and high capacity extrusion processing for biaxial oriented polypropylene, polyester and high-density polyethylene film manufacture. Development work in new products and processes have all been for implementation in a manufacturing environment.

Qualifications:

I have worked in an industrial research role starting from May of 1972. My initial Degree and industrial work was as a Chemist in the synthesis and identification of novel organic compounds. This work was as a research Chemist at Sterling Drug (10/72-10/74). In this capacity I synthesized novel organic molecules. In the conduct of this work I used and interpreted the results of many analytical and spectroscopic tests to identify and confirm the precise chemical composition and chemical structure of what I had synthesized.

I then returned to school and received a PhD in Chemical engineering in May 1979 from Rensselear Polytechnic Institute in Troy New with a particular focus on the single screw extrusion melting mechanism and processing behavior of polymeric materials. My formal course work and thesis required a detailed knowledge of polymeric materials and their physical characterization and behaviors as well as the functioning and operating characteristics of single screw extruders. Since graduation I have worked in the process and product development of polymeric films and in particular in the fields of oriented polyester and propylene films for industrial and food packaging applications. In the course of this work I have been responsible for the research and development and modification of industrial manufacturing processes and film products to invent and manufacture new films, to improve film product performance in conversion and on packaging equipment, film manufacturing performance and productivity. In the course of

this work I have developed detailed knowledge of extrusion equipment and process information, in the development of oriented film products for packaging applications and in the process of film orientation. I have studied both the detailed requirements of film products and the process conditions and requirements to produce high quality, fit for use coextrusion products.

From 1978 to 1981 I worked in the process development of polyester (PET) film manufacture and studied the drying, extrusion, melt casting, melt pinning, orientation and stretching behavior, and film heat stabilization of this material as well as the means of characterizing the orientation of the films produced. From 1981 to 2000 I have worked particularly in the development and production of new and improved oriented plastic packaging films for food packaging and studied and designed commercial process equipment and modifications to equipment for the extrusion, coextrusion, melt casting, melt pinning, orientation and stretching behavior, film heat stabilization, surface treatment, winding, metallization, printing, lamination and packaging machine performance of oriented polypropylene, high density polyethylene, linear low density polyethylene and other materials as well as the means of characterizing the orientation of the films produced. I have produced oriented coextrusions containing polypropylene, polyethylenes, nylon, EVOH, PET and various other polyolefins and polymers.

During the course of this work I have directly or in teams or as a leader of development teams, been responsible for the development and evaluation of a wide range of oriented film manufacturing processes, the converting behavior of the films produced and the structure property relationships which describe the film products produced from the materials and the process. This work has required the study of film extrusion and coextrusion, Coextruded film orientation behavior, Coextruded film formulation development for manufacturing conversion process such as film metallization, printing, lamination, bag formation and bag sealing and for improved operation on packaging machines. In many instances in the normal performance of these responsibilities, I have had to reverse engineer competitive film products and commercial film structures. With my background as a chemist and a polymer processing engineer I have performed many of the tests and am intimately familiar with the analysis and interpretation of the results of many analytical and spectroscopic tests used to measure film orientation and composition.

In addition to the work described above, in the normal course of my work, it was oftentimes necessary to work with various equipment vendors to aid in or direct the specification of, the characterization of performance of, and if necessary the design of equipment such as extruder screws, dies, melt systems coextrusion systems and polymer filtration systems for the production of the oriented coextruded film products in manufacturing.

I have taught in house extrusion training at Mobil Chemical and as a independent Extrusion and Films consultant, an extrusion training class which I conduct for customers. In regards to die design I am well versed in the theory and practice of die design for various polymer processing methods and understand the principles and practices of controlling melt distribution in various flow geometries such as flat sheets

and tubes. In terms of multilayer oriented film expertise, I have developed many oriented multilayer films using the processes of polymer extrusion, melt filtration, coextrusion, extrusion coating, extrusion lamination, coating and metallization. I am a recognized expert and consult in the design and manufacturing of oriented multilayer coextruded films for food and industrial packaging. I teach a course in Coextrusion Technology for the Society of Plastics Engineers (SPE) and have given technical presentations and training seminars in the areas of extrusion technology, polymer film orientation, metallization, chemical (flavor and aroma) and gas (moisture and oxygen) barrier properties and heat sealing technology.

I am a well recognized technical expert in the field of extrusion and film manufacturing and film metallization and have been a leader in the development and dissemination of extrusion and film technical knowledge as a member, and leader of the Extrusion Division Board of Directors of the Society of plastics Engineers. Since June of 2000 I have been an independent consultant in the areas of extrusion, coextrusion, film process and product development, film conversion and metallization. I have specified, overseen the mechanical design and had built a modified melt rheometer and a pilot line for the microembossing of polymer films.

I hold 9 United States Patents in the areas of metallized and heat sealable films as well as several related and different foreign patents. During my employment with ExxonMobil Chemical Films Division, aside from the prosecution of my own patents, I managed the Films Divisions Intellectual Property for a period of approximately six years. In the normal course of performing this responsibility I worked closely with inventors and Patent Council in the prosecution of new inventions in both the United States and European Patent offices. In this role I was called upon to review new technology for inventive content, to aid inventors and attorneys in the development of patent disclosures, review patents as potential prior art and help in any necessary way with the development of responses to US Patent Office actions. I also reviewed US Patents for technical content at the request of Patent Council in the development of various legal opinions required in our normal course of business. In addition I reviewed European patents and published applications of competitors to determine the need and justification for oppositions to issued patents. In addition, when necessary I aided inventors as well as personally developed the technical defense and counter arguments in foreign oppositions to issued patents.

Other cases:

In the course of my work at ExxonMobil, from approximately 1985 to 1994, I participated in a Patent infringement case between Mobil Chemical Canada and Hercules of Canada relating to US Patent 4345005 and its reissued Canadian counterpart. During this work I performed experiments and an expert report on the effect of film slip modification on: migratory slip surface bloom and aluminum adhesion to surfaces of metallized films and gave sworn testimony at Trial in the Supreme Court of Canada. (approximately 1992 to 1993).

Since June, 2000 I have supplied testimony as an expert witness in the following cases:

During 2001 I supplied a written expert report and affidavit on behalf of the claimant:

IN THE HIGH COURT OF JUSTICE
QUEENS BENCH DIVISION
TECHNOLOGY AND CONSTRUCTION COURT
Claim No. HT00394
Between:
DUNMORE CORPORATION (A U.S. FIRM) Claimant
and SWAN PACKAGING LIMITED Defendant

During 2002, I supplied a written expert opinion and was disposed by Video under oath

AXA Global Risk US v. Tyco, International,
Circuit Court Case No.: 00-7609 25
Broward County Florida

During 2004 I have supplied a written opinion and Expert testimony under oath by deposition in:

UNITED STATES INTERNATIONAL TRADE COMMISSION
Before the Honorable Delbert R. Terrill, Jr.
Washington, D.C. 20436
Investigation No. 337-TA-496
In the Matter of: CERTAIN HOME VACUUM PACKAGING MACHINES

And during 2004 I have supplied a written Expert opinion in:

STATE OF NEW HAMPSHIRE SUPERIOR COURT, Rockingham, ss.
In the Matter of:
A.P Extrusion v. Advanced Polymers, Inc. et. al.,
Rockingham County (N.H.) Superior Court 01-E-442

Advanced Polymers, Inc. v. Saber Machine Design Corporation et. al.,
Rockingham County (N.H.) Superior Court 01-E-645
New Hampshire Supreme Court 04-40

During 2005 I have supplied a written Expert opinion and was deposed April 14, 2005 in:

Jefferson Smurfit Corporation Plaintiff v. CDL Technology, Inc Defendant

Case number 03L 015877 in the Circuit Court of Cook County Illinois, County Department, Law Division

Education

Ph.D. Chemical Engineering, May 1979
Thesis Advisor: Dr. Chan I. Chung
Thesis Topic: Plasticating Behavior of Solid Polymers at Processing Conditions: Experimental and Theoretical Study
Department of Chemical and Environmental Engineering
Rensselaer Polytechnic Institute, Troy New York 12181

M.E. Chemical Engineering, May 1976
Thesis Advisor: Dr. Chan I. Chung
Department of Chemical and Environmental Engineering
Rensselaer Polytechnic Institute, Troy New York 12181

B.A. Chemistry, May 1972
Department of Chemistry
West Chester State College
West Chester, Pennsylvania 19380

Industrial Experience

June 2000 to Present – President:
EMMOUNT Technologies
88 Country Downs Circle
Fairport, NY 14450
Specification, design and trouble shooting of polymer processing systems comprising: extrusion, flat die and coextrusion systems, melt casting and pinning, mono and biaxial orientation, Surface treatment by corona, flame and plasma. Packaging film design and manufacture and film metallization. Expert witness, with trial experience, Intellectual property specialist, Teach In-house training classes in extrusion, coextrusion, orientation, surface treatment and product design

May 1997 to June 2000 - Manager of Exploratory R&D:
Mobil Chemical Films Division
Duties included managing and defining new R&D directions and a core group of 6 exploratory scientists. Included new vacuum processes for metallized film manufacture, new polymers for biaxial orientation, fundamental studies of evolving orientation equipment, atmospheric plasma processes, fundamentals of HDPE orientation structure-property development, and hermetic seal development Also, served as the Intellectual Property Co-ordinator for Division and an in house technology and patent consultant. Lead the Company Council of Scientific Advisors. Developed exploratory program and new business selection criteria.

October 1981 to May 1997 - Research Associate various levels
Mobil Chemical Company Films Division
Duties: Direct several engineers and conduct various product development activities from bench scale development to full-scale production. Developed Shrink Film, metallized film, conduct exploratory product and process developments, expert for successful Canadian Patent infringement case and trial, specified, developed and implemented leading processing technology in

manufacturing. I was member of Council Of Scientific Advisors, and an in-house processing and patent expert.

October 1978 to October 1981- Process Development Engineer
ICI Americas, Films Division Research and Development
Hopewell, Va. 23860
Supervisor: Dr. Tom W. Haas
Duties: Responsible for various plant capacity improvement projects from prototype design and laboratory testing to plant implementation. Handle daily operation and scheduling of Research Film Line and operator and technician assignments. Also design experimental programs and supervise film line experimentation

October 1972 to August 1974 - Assistant Research Chemist
Chemistry Division, Organic
Sterling Winthrop Research Institute
Rensselaer, New York
Supervisor: Dr. Dennis Bailey
Duties: Carry out synthesis of novel organic compounds for submission and evaluation as potential pharmaceuticals

Professional References

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Professional Memberships

Society of Plastics Engineers
Vice President of Society; May 2001-2004
Elected Fellow of Society: May 2000
Extrusion Division
Division Board Member 1982 to present
Councillor 1992-1998
Chairman 1990-1991
Chairman elect 1989-1990
Technical Program chairman 1989 ANTEC
Member Technical Volume Committee

AIMCAL Association of Industrial Metallizers Coaters and Laminators
Organization's Metallizing Consultant: Jan 2001 to present

Society Of Vacuum Coaters
Member WEB Tac committee 1999 to present
Society of Rheology

American Chemical Society
President Student Chapter 1971
Vice President Student Chapter 1970

Awards
Honored Service Member of Society Of Plastics Engineers, May 2004
Fellow of Society Of Plastics Engineers, May 2000
SPE Extrusion Division Outstanding Service Award, 1991
Two Separate Technical Achievement Awards, Mobil Chemical Films Division, Technical Operations
Managerial Award, September 1970, General Electric Laboratory Operation, Philadelphia, Pennsylvania
American Institute of Chemists Medal for Scholastic Achievement, May 1972
Plastics Institute of America - Partial Fellowship 1975

A. Goodyear Tire & Rubber Fellowship, 1976
Various Service awards from Boy Scouts of America, Otetiana Council

Community Service:

May 2002: Silver Beaver Award, Otetiana Council BSA
1995 to 2000: Company representative and personal advocate for PREP pre engineering program at RIT
1987 to present: Assistant Scoutmaster / Committee Chairman Troop 209 Arrowhead District, Otetiana Council BSA
1986-1987: Cub Master Pack 225 Arrowhead District, Otetiana Council BSA

Adult Sunday school Teacher 1982-1987 Penfield United Methodist Church

Publications of Eldridge M. Mount III

Mount III, E.M., Masters Thesis, "The Melting Behavior Of A High Density Polyethylene On A Heated, Moving Metal Surface - A Comparison Of Experimental And Theoretical Results", Rensselaer Polytechnic Institute, Troy, N.Y., (1976)

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